

Forecast 1d – DESCRIPTION AND JUSTIFICATION

The forecasts in this section are based on the 2009 Update of the 2008 Load Forecast prepared with each of Tri-State's 44 Members. The 2008 Load Forecast was prepared in accordance with the Rural Utilities Service (RUS) guidelines (7 CFR 1710 Subpart E). The 2009 Update adjusts the 2008 Load Forecast for changes in the large commercial class and actual 2008 number of customers for other classes.

Under the RUS guidelines, a forecast is prepared for each Member system and these are combined to form Tri-State's Load Forecast. Members break down their consumer energy sales into nine possible classes: residential, seasonal, irrigation, small commercial, large commercial, public authorities, streetlights, resales to RUS, and resales to others. Forecasts of energy use in each of these classes are developed using econometric techniques, time series extrapolation or customer and managerial expectations. Seasonal sales represent sales to accounts that do not have year-round energy use. Sales to RUS are sales to other distribution cooperatives that are RUS borrowers. These RUS sales typically serve areas of neighboring cooperatives that are electrically isolated from larger load pockets. The RUS sales total less than 1 MW, and are included as a part of applicable Member load forecasts.

The forecast of coincident peak demand for each Member is based on historical load shapes. Coincident peak demand forecasts for Tri-State are derived from the hourly sum of Member load forecasts.

The primary source for historical data regarding use by each class of consumers is RUS Form 7. Information on the number of accounts, energy use per account, total energy and the average price of electricity is collected monthly from each Member. In addition, data on large commercial accounts is gathered on RUS Form 345. Tri-State obtains economic and demographic data for each Member from Woods & Poole Economics, Inc. (W&P). The vast majority of data from W&P originates with the Department of Commerce, Bureau of Economic Analysis (BEA). All projections of the economic and demographic data have been performed by W&P. Tri-State uses more than 20 measures of employment and income activity by sector from the W&P data.

The electricity that Tri-State Members offer often competes with propane, natural gas and fuel oil as an energy source. Historical price data for these alternative fuels has been obtained from the DOE's Energy Information Administration (EIA). Tri-State based its price projections for each of these alternative fuels on information from the EIA.

Tri-State uses weather data from 20 weather stations within Tri-State's region supplied through DTN Meteorlogix. Tri-State's database includes temperature, both heating and cooling degree-days, and precipitation. Weather normalizations of this data (defined as 10-year average values) are used for Tri-State's energy and demand forecasting.

Forecasts of energy sales for the retail classes of each of Tri-State's 44 Members were made on the basis of econometric analysis and/or extrapolation techniques. The econometric analysis examined correlations between energy use and customer numbers with such factors as weather, fuel prices, electric prices, employment and income. Tri-State employs statistically adjusted end-use models for the residential class.

Forecast 1e - DEMAND-SIDE MANAGEMENT

The load forecast presented here includes the impact of existing demand-side management measures through the econometric method used to prepare the forecasts. These models accommodate changes in technology or customer preferences that impact the energy use per account through the use of time-trend variables.

The load forecast also accounts for changes in end-use equipment saturations and efficiency improvements anticipated through equipment efficiency standards, building shell efficiency improvements and natural attrition of less efficient equipment. This impact is modeled through the statistically adjusted end-use modeling approach.

Forecast 1f - HISTORICAL DATA

Previous forecasts of coincident summer and winter peak demand and energy sales are shown in Table Fcst31 through Table Fcst48 compared to actual. The forecast used in the 2008 CPUC Annual Progress report is also shown in the tables and is shown in Charts Fcst9, Fcst10 and Fcst11 for the total Tri-State system .